STRATEGY RESEARCH PROJECT

CIVIL RESERVE AIR FLEET (CRAF)---DO WE STILL NEED IT?

BY

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USAWC CLASS OF 1996

U.S. ARMY WAR COLLEGE, CARLISLE BARRACKS, PA 17013-5050

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ABSTRACT

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TITLE: The Civil Reserve Air Fleet (CRAF) -- Do We Still Need It?

FORMAT: Individual Study Project

DATE: 19 March 1996 PAGES: 29 CLASSIFICATION: Unclassified

While always maintaining a core of militarily controlled transportation assets throughout its history, US policy has been to rely on the nation's commercial transportation industries to make their personnel and equipment available to the Department of Defense, should the need arise.

The first extensive use of these assets came in 1991 with Operations Desert Shield and Desert Storm. For the most part, the system worked well with some minor problems. However, the world has changed since then and the question arises, can we continue to rely on civil sector augmentation to provide such substantial amounts of lift capability? In light of fiscal realities, can we afford not to? What actions and policy changes are needed to maintain the viability of commercial transport augmentation in the future? The military and industry have been working together to introduce new incentives to ease the burden for the carriers and maintain CRAFs viability in the future.

This SRP will look at the history of the civil reserve air fleet; its success and lessons learned from Desert Shield/Storm; current DOD requirements for airlift; changes that have occurred in the airline industry which effect their participation in the CRAF program; and recommendations of changes needed to keep the CRAF program viable.

Introduction

Our national military strategy of peacetime engagement; deter aggression and prevent conflict; and fight and win evolve around two very important strategic concepts--overseas presence and power projection. With fewer US forces permanently stationed overseas, we must proportionately increase our capability to project forces abroad. The existence of a credible power projection capability complements our overseas presence in acting as a deterrent to potential adversaries.[1]

One key element in the United States' ability to project combat power quickly anywhere in the world and on short notice is our airlift capabilities. As in a major conflict, mobility forces would contribute both to the initial deployment and to the sustainment of the operation. Depending on the location, significant amounts of materiel might have to be moved, particularly if US forces were sent to a region where the infrastructure was limited and host nation support was either lacking or not immediately available.[2]

The Mobility Requirements Study of 1992, and subsequent to that, the Bottom-Up Review Update, clearly defined mobility requirements for the post-Cold War era. Based on its results, the Department of Defense has established an intertheater airlift objective of between 49 and 52 million ton-miles per day of cargo capacity.[3] A ton-mile is the ability to move one ton of cargo one mile by aircraft. The precise amount of airlift needed will depend upon the level of prepositioning that can be achieved in the two Major Regional Conflict areas-- Southwest Asia and Korea. Clearly these requirements greatly exceed the US Air Force's lift capability of 17 million ton-miles per day. The shortfall must be made up some how. The answer lies in the use of commercial aircraft, thus the importance of the Civilian Reserve Air Fleet (CRAF).

In the Beginning.....

The history of the Civil Reserve Air Fleet, which is so vital to our national military strategy, has been a constant struggle between the role of the civilian airline industry and the US military in peacetime and during wartime. The CRAF concept was developed as a result of lessons learned from World War II and Korea; namely, that the United States could not maintain enough airlift in its military forces to adequately respond to all of the nation's world-wide contingencies. This can be seen through the numerous commissions and committee meetings that dealt with the subject.

The Finletter Commission, in 1948, explored the need for an air reserve to serve as an auxiliary to the military in case of war or national emergency. Their results recognized the need to augment the military's airlift capability especially in the area of cargo transport capability. The commission determined that America's air industry was neither strong nor healthy enough to be considered reliable to augment the military, especially in the area of cargo capability. They saw the need to subsidize commercial cargo airlift in order to develop a fleet that would act as a "pool" for military emergencies.

Three years later, the Douglas Commission conducted a much more in-depth study of US military wartime airlift requirements. They looked at the types of civilian aircraft, their availability dates, and assessed their military value for airlift capacity which would be of invaluable aid to military planners. In 1951, their report became the basis for organizing the commercial carriers to augment the military airlift system. The concept for organizing commercial carriers called the Civil Reserve Air Fleet was approved by both DoD and the Department of Commerce (DOC). Headquarters Military Air Transport Service (MATS)

worked with DOC and civil airlines on how to best incorporate civil aircraft into military operations in case of national emergency.

After the Korean War, the mission of military airlift became an increasingly important element of our national defense posture. Spurred on by intense competition in the airline industry and great public interest in reducing the size and expenditure of government, a debate developed involving MATS, the airline industry, and Congress over the role of military transport in peace and war. The fact that many of the air routes flown by military pilots were the same as their civilian counterparts led many to believe there were inefficiencies in the system. The issue became how to best consolidate the airlift mission while reducing government expenditures.

In an effort to develop a national statement on US aviation policy, President Eisenhower, in 1953, ordered a complete review of US aviation policy. The result was two government reports -- the Air Coordinating Committee report on *Civil Air Reserve Policy*, and the Hoover Commission's *Report on Transportation.*

The first report stated that the government should, "to the greatest extent practical, adjust its use of air transport, so as to use existing unutilized capacity of US air carriers." It also acknowledged that government agencies must often base its decisions on factors in addition to business economies.[4] This obvious ambiguity allowed both sides to declare victory and added to future debates.

In 1955, the Hoover Commission seemed to favor the side of the airlines. It made two significant recommendations: First, consolidate all military airlift under one organization (MATS), and second, increase support for the civil reserve air fleet by limiting MATS' peacetime operations to the levels necessary to maintaining minimum war readiness of the

command. The peacetime operations of the integrated service should be restricted, and realistically limited, to air transportation of persons and cargo only after all forms of commercial carriers have handled traffic appropriate and properly assignable to their service.[5]

By the mid 1950s, the airlines found considerable support in Congress for an increasing role in government peacetime business. This time the debate was between the Congress and DoD. The result was a congressional budget directive that US civil carriers assume 40 percent of the passenger and 20 percent of the cargo requirements of MATS during fiscal year 1958.

The following year, allegations were made by the airlines that DoD failed to follow the directive. Hearings were held by Representative Holifield of California and included substantial discussion of the CRAF program. The committee realized that the airlines were strictly motivated by money, while the military, they felt, was building an airlift empire. The hearings laid the groundwork for the first national airlift program. In essence, the committee recommended the military limit its airlift to "hard-core" requirements (i.e. outsize cargo, security missions, direct support missions to tactical combat units) while leaving passenger and conventional cargo business to the commercial carriers.

In 1960, the airlift debate shifted its focus to the military's mobility preparedness. The US Army complained that the JCS failed to support the Army's airlift requirements. A special House Armed Services Subcommittee looked into the matter and found it was true. The JCSs war plans allocated most of MATS' airlift to the Strategic Air Command and Tactical Air Command, thus leaving the Army, Navy, and Marine Corps dependent on CRAF assets. These findings prompted President Eisenhower to direct the Secretary of Defense to examine MATS' peacetime and wartime responsibilities. The result was the first national statement on airlift.

Essentially it directed that the commercial airlines, through the CRAF program, would augment the military's need for airlift; MATS , in turn, would provide the "hard-core" airlift. MATS was to reduce its regularly scheduled, fixed routes, consistent with assured commercial airlift capability at reasonable cost, and consistent with economical and efficient use, including realistic training.[6]

This ended the airlift debate and provided the framework for defining civil and military airlift responsibilities until President Reagan's National Airlift Policy Statement.

Even though CRAF had never been activated, on 24 June 1987, President Ronald Reagan reaffirmed the CRAF program by signing the National Airlift Policy directive (NSD 280) which is the cornerstone of the program. It states in part:

The national defense airlift objective is to ensure that military and civil airlift resources will be able to meet defense mobilization and deployment requirements in support of US defense and foreign policies. Military and commercial resources are equally important and interdependent in the fulfillment of this national objective.[7]

How They Do It .....

At its inception, DoD planned to utilize the CRAF only in a general war. During the relatively peaceful era following the end of the Korean War, air carriers viewed their participation in the CRAF program as a mechanism to guarantee they received government business without facing much business risk of losing market shares, should CRAF activation occur, to domestic competitors who were not in the CRAF.[8]

In the 1960s, changes in the global environment led to a broadening of responses of US national security contingencies. This led to an increasing reluctance on the part of airline executives to continue participation in the CRAF program for fear of loss of market shares if fully activated. It was apparent that something had to be done to entice the airline industry to continue their participation in the program. DoD's solution was to tie its peacetime airlift augmentation business to CRAF participation. As a result, this led to reduced passenger travel over Military Air Transport Service (MATS) and later Military Airlift Command (MAC) routes using organic aircraft in favor of increased use of commercial services. Since the 1960s, more than 90 percent of DoD's peacetime passenger requirements have been met by CRAF carriers.[9]

The program is designed so carriers wishing to join the CRAF offer militarily useful aircraft to AMC, and sign a contract with the government. These contracts cover one year, and entitle AMC to the use of these aircraft and commercial crews if the CRAF is activated.[10] These contracts vary in dollar amount from airline to airline based on the mobility value (usefulness to AMC) of the aircraft they commit to the CRAF program.[11] An airline receives value points based on the percentage of capacity it would provide if called up under CRAF, and the amount of business that an airline gets from DoD is directly related to the number of points it has. If an airline provides 10 percent of the CRAF capacity, it should get 10 percent of the military's business. While this does not always happen because an airline simply does not have the type of capacity required, that is the general principle.[12]

The contracts establish a ten-hour aircraft utilization rate, which means for every aircraft called-up, the government intends to utilize the aircraft for ten hours. The aircraft must then be available for use within 24-48 hours (based on the stage of CRAF activation), and a 4:1 crew

ratio must be achieved, which means the airlines must guarantee 4 complete crews for each aircraft committed. These crew members must not be members of the National Guard or Reserve.[13] Based on its projected airlift requirements, AMC assigns aircraft to Stages I, II. or III, as well as to a particular segment or category of mission. An airline's commitment of aircraft and crews to stage I entitles the company to a share of the DoD's peacetime airlift business. Planners try to assign at least one aircraft to Stage I from each airline offering assets to that stage.[14]

The exact size and composition of the CRAF fluctuates as carriers adjust the number of aircraft participating in CRAF due to national military requirements. Under full mobilization, the CRAF program provides approximately 30 percent of the total cargo airlift capability and 95 percent of the passenger airlift capability.[15]

AMC maintains three different segments of CRAF due to the nature of airlift emergencies which may occur. They are International, Aeromedical, and National.

The international segment is comprised of long-range and short-range sections, which is served by the AMC International Airlift Services Contract. Long-Range International (LRI) section supports AMC's global operations. CRAF long-range international capability is computed in terms of wide body equivalents (WBE). A WBE is equal to the capability of one B747-100 aircraft.

The short-range international (SRI) section supports short-haul operations from the continental United States to near offshore.

The aeromedical segment supplements the organic fleet to provide global aeromedical evacuation capability. It uses only B-767 aircraft.

The national segment is comprised of Domestic Services and Alaska sections. The domestic section incorporates passenger requirements within the 50 states only during stage III. It uses smaller turbo jet passenger aircraft such as B737s and MD80s. The Alaskan section supports the 11th Air Force (PACAF) and uses B737s and DC-6 aircraft only during stages II and III.

CRAF may be incrementally activated in three stages. The Commander in Chief, US Transportation Command with Secretary of Defense approval, can activate all three stages.

Stage I has only LRI requirements for committed aircraft expansion and augments AMC's airlift force during a committed expansion where requirements exceed AMC organic capability. Response time is 24 hours. Its composition is seen in Figure 1.

Stage II is activated for all airlift emergencies short of national emergency. Its requirement is 214 aircraft. Response time is 24 hours, except aeromedical aircraft which is 48 hours.

Stage III activation supports defense oriented national emergencies. It consists of a requirement of 424 aircraft with a response time of 48 hours.[16]

FIGURE 1

Composition of the CRAF Program
(number of aircraft)

Segment	Stage I	Stage II	Stage III
Long Range Int'l (passenger)	30	85	129
Long Range Int'l (cargo)	30	75	116
Aeromedical	0	19	19
Short Range Int'l (passenger)	0	14	88
Short Range Int'l (cargo)	0	18	23
Alaskan Cargo	0	3	15
Domestic Service	0	0	44
Total	60	214	424

Source: US Air Mobility Command, Civil Reserve Air Fleet,
(Scott AFB, IL: 30 Mar 95)

There was and still is, no legislative basis for CRAF; its success depends solely upon the airlines cooperation with the government.[17] As it turns out, CRAF is a great deal for everyone. The CRAF program provides the government with several important benefits. CRAF provides up to half of the nation's strategic airlift capability without the government having to purchase additional aircraft, pay personnel costs, or fly and maintain the aircraft during peacetime. The only direct outlay of funds for the program since it inception has been for the CRAF Enhancement program.[18] To date, the Air Force has spent about $600 million modifying certain civilian cargo aircraft so that it can carry military cargo. For a very small cost, DoD has had on call a very substantial airlift capacity. Replacing the CRAF's 1992 Stage II capability with military-style transports would have cost the DoD about $1 billion annually (1992 dollars) over

the past several decades.[19] Because maintaining reserve airlift in CRAF is much less costly than maintaining reserve capacity in the military airlift fleet, the CRAF program has been very cost-effective for providing the civil sector's types of airlift capabilities.[20] It is estimated that over a 30-year period, the basic CRAF program has cost the government approximately $5 billion.[21] Given the current price tag of $ 150 million per aircraft, CRAF aircraft are certainly well worth the cost.

For the airlines, the decision to participate in CRAF makes good business sense. For little cost to the company, an airline can commit its aircraft to CRAF and earn a share of AMC's $700 million annual peacetime contract flying business. Many smaller airlines depend on this business, but even for the majors, it offers revenues that help pay for some of the training and preparation costs that go with reserve fleet commitments.[22]

CRAF in the Desert .....

On 2 August 1990, the Republic of Iraq decided to invade neighboring Kuwait. This event prompted President George Bush to direct the deployment of US forces and equipment on what would be known as Operation Desert Shield. It was soon apparent that the capacity of the US Air Force, which was engaged in other world-wide missions, would be exceeded. The airlines, in an effort to stave off activation of CRAF stage I, volunteered their aircraft in large numbers. By mid August, nearly all of the organic airlift fleet--95 percent of the C-5s and 90 percent of the C-141s--were dedicated to the deployment. Commercial air carriers volunteered 30 aircraft and flew more than 100 cargo and passenger airlift missions during the first 10 days of the crisis.[23] This worked out well for the first two weeks, until it became obvious the operation had built up to the

point where additional transport aircraft were needed in order to satisfy the required deployment of forces.[24]

With the urgent need for expanded airlift capability, CINCMAC activated CRAF Stage I on 18 August 1990. Upon activation of CRAF, MAC assumed mission control of the flight while the airlines retained all operational control of their aircraft and crews.[25] Stage I provided 18 passenger and 23 cargo long-range international wide-body aircraft to supplement MAC's capability.[26] As initial build-up gained momentum, an aircraft was landing in the Middle East every ten minutes or less, and the pace of activity and the amount of materiel being moved continued to grow.[27] The deployment of troops and equipment continued to build to the point where additional airlift, especially cargo, was required. By December 1990, the backlog at ports of embarkation had built up to the point that it was necessary to implement Stage II of CRAF. On 16 January 1991, SECDEF approved CINCMACs request to activate part of the cargo segment of CRAF stage II.[28] Stage II provided the US Air Force with 17 additional long-range international cargo aircraft. With greater experience gained by US Air Force personnel on palletizing loads to meet the various commercial aircraft designs and with improved loading equipment, the backlogs began to diminish to the point where no additional CRAF aircraft would be required.

The performance of the commercial airlines during Operation Desert Shield/Storm was hailed as a great success. From the standpoint of the DoD, the partnership worked extremely well. The air carriers provided more airplanes than were actually needed and accounted for a significant percentage of the total MAC requirement. Similarly, the operators benefited in that all missions were flown at the regular MAC charter rate. Since this includes a profit component

(for passenger flights, the rate amounts to about $800 per seat per mission), and the DOD absorbed all fuel cost increases, the carriers were, in many cases, finding that flying for MAC was more profitable than operating in the presently depressed civil environment.[29] In all, commercial domestic and foreign carriers provided more than 60 percent of the passenger airlifted in support of Operation Desert Shield/Storm between August 1990 and February 1991. During the same period, CRAF airlines carried about 25 percent of all the cargo MAC moved by air.[30]

For the redeployment phase, CRAF aircraft transported 84 percent of all passengers and 40 percent of all cargo traffic.[31] Some analysts say that if it were not for CRAF, our troops would have been in the Middle East an additional two and one-half months waiting for air transportation back home. However successful the first ever activation of CRAF was, there were many lessons learned. Potential problem areas need to be addressed if the program is to remain viable.

Lessons Learned .....

One of the first lessons learned from Operation Desert Shield/Storm centered around the enormous problem of integrating the CRAF force into the airflow with military aircraft. The airlift system, already working at capacity with over 300 C5 and C141 aircraft, simply could not absorb CRAF capability overnight. Consequently, both the planning and execution capabilities of the strategic airlift system were exceeded.[32]

Existing communications systems did not always identify the type or owner of a CRAF aircraft before its arrival at the airfields, thus resulting in huge cargo delays. These delays

occurred when the cargo was built for a different aircraft than the one scheduled to pick up the load. In at least 20 cases, aircraft waited on the ground while loaders either tore down pallets and rebuilt them because they would not fit or built them only after the delayed cargo arrived. [33] For loads assigned to the CRAF, ground crews need to know the exact aircraft model and series if they are to build packages only once.

Long turn-around times were experienced at the Persian Gulf airports. The primary cause was a lack of training by military personnel in loading and off-loading procedures for civilian aircraft. To compound the problem, the Air Force experienced shortages of commercial-type materiel handling equipment. This was particularly true of the wide-body loader. This piece of commercial equipment, which is the only means of downloading a wide-body aircraft, is in critical short supply in the military inventory.[34] Lack of procedures and materiel handling equipment combined to create airfield congestion both in the US and at terminals in the theater of operations.

Communications problems also plagued airlift operations from the start. Incompatibility between civilian and military communications and navigation equipment was a prime example. Commercial airliners are not UHF compatible, nor do they utilize TACAN navigational equipment. Thus, enroute mission updates were not possible, and in the terminal phases of flights these aircraft were unable to perform instrument approaches due to the incapatibilty of the navigational equipment.[35]

The senior lodger concept was also an area of concern. A senior lodger is an air carrier with a large presence at a particular civilian airfield. Consequently, this airline would have extensive ground service capabilities relative to other companies. The primary rationale for a Senior

Lodger is to help CRAF carriers that lack an adequate international base of operations to gain access to ground services in unfamiliar airfields.[36] Since senior lodgers are not used in Stage I, the civil carriers had nobody to represent their interests on the ground. During the early days of Operation Desert Shield, some air carriers reported that their aircraft had to wait 7 or 8 hours before offloading, while military aircraft were given priority service. More importantly, that extra ground time could have been translated directly into additional CRAF mission time during the early, critical phases of Operation Desert Shield.[37]

The matter of transporting hazardous materiel was soon apparent. At the start of the operation, some airlines in the CRAF lacked certification to handle hazardous materiel, which complicated MAC's ability to move these loads on commercial aircraft. Carriers involved in transporting these cargoes for the military during peacetime held the proper credentials, but not all airlines in the CRAF regularly flew haz mat. CRAF's activation highlighted a problem linked to information systems that made it difficult for MAC to match these missions only with certified carriers.[38]

MAC experienced an airlift cargo shortage during the Desert Shield mobilization. An analysis of CRAF aircraft reveals Stage I and II allocations favor passenger aircraft by a 60% to 40% margin, despite the known criticality of cargo airlifts in all scenarios.[39] As a result, MAC was forced to go to stage II (minus the passenger aircraft) earlier than necessary.

Crew availability was another area of concern not only to the CRAF participants but the US military as well. According to the agreement, the commercial airlines agree to provide four crews per aircraft. This proved very difficult, if not impossible, for some of the airlines. According to William W. Hoover, ATA executive vice president, " MAC did not fully

understand the impact that call ups of Reserve and National Guard pilots would have on commercial crew availability. The percentage of crews called to active duty reached as high as 20% at some airlines." Partly because of this, American airlines withdrew from the CRAF in FY93.[40]

The failure to allocate CRAF aeromedical evacuation aircraft in stages I and II, while not a problem during the war, did cause several C141 aircraft to be removed from the normal cargo airlift flow to provide backup aeromedical support if needed.

The final major lesson learned from Desert Shield/Storm centered around the requirement for adequate insurance for the commercial airlines. CRAF carriers were eligible for government-sponsored liability coverage to replace commercial policies that did not cover wartime situations, but it was not clear whether some routes, such as short hops within the US itself, were covered. The insurance related only to aircraft operations from the final departure airfield and covered ramp-to-ramp activities. It did not cover events conducted on the ground such as refueling, catering service, and en route maintenance. Carriers operated in and out of Dhahran and Riyadh, Saudi Arabia, which were within striking distance of the Iraqi surface-to-surface missiles and where ground accidents and damage could occur. The gaps and ambiguities caused the carriers serious concern.[41]

The Current Scenario.....

The US military, while always maintaining a core of military aircraft to partially meet the nation's airlift mobility requirements, has always relied heavily on the commercial sector for augmentation. This reliance has worked well over the years especially when the trends of the

airlines industry, in terms of types of aircraft, financial stability, and trade routes, generally coincided with US national defense requirements. But, what happens when airline trends no longer coincide with military requirements, as currently seems to be the case?

Extensive restructuring continues to be a priority among the larger carriers. This restructuring includes, among other things, the deferment of new aircraft deliveries, route realignments (both domestic and international), reducing service at or withdrawing from unprofitable hubs, transferring short-haul routes to regional code-sharing partners, and cutting jobs/salaries.[42]

It appears the air carrier industry, in general, is becoming less "CRAF friendly". Statistics show that the trend in the composition of US air-carrier fleets is away from larger transports like the 747 toward mid-size transports like the 767 and MD-11.[43] By far the largest increase, in terms of number of aircraft, is projected to occur in the two-engine narrowbody aircraft category, which is expected to grow by an average of 178 aircraft (5.2%) annually. By the year 2006, two-engine narrowbody aircraft are expected to account for 71.4 percent of the fleet, up from 57.1 percent in 1994.[44] Most of the large transports are currently being purchased by foreign air carriers. Thus, the very large aircraft that are most desirable for CRAF may become harder to enlist because US carriers are shifting to smaller aircraft better suited for their hub-and-spoke system.[45]

An additional concern for the DoD is the trend towards international business mergers or ownership. During the 1980s many US and foreign carriers began entering into marketing alliances with, and in some cases acquired ownership positions in, other carriers. Examples such as British Airways and USAir, Northwest and KLM, Scandinavian Airlines System (SAS) and Continental, just to name a few. Though foreign ownership of US airlines is currently limited to

25%, the Clinton Administration is proposing to allow up to 49%, which raises the possibility of a CRAF activation being delayed or curtailed due to the political concerns of a foreign owner.[46]

Financially, the performance of the commercial airline industry showed considerable improvement. During the previous four years, US commercial airlines' cumulative operating losses totaled almost $5.0 billion. In 1994, the industry reported operating profits totaling nearly $2.6 billion.[47] The future outlook for the industry looks even better. Inflation is projected to remain in the low to moderate range from three to four percent. Oil prices are expected to decline slightly then increase 3.8 percent over the remaining 11 years. For the next ten years, the consensus is that the US economy will experience moderate economic growth of approximately 2.5 percent annually.[48] With the future looking more profitable, the question arises whether the airlines still need the government's business and to what degree?

All this combined with the drawdown in forces stationed overseas will inevitably reduce the amount of peacetime international business to be offered to the CRAF carriers. The declining presence of US military forces overseas threatens to eliminate one-half to three-fourths of the military's routine international airlift needs of the 1980s.[49] Keeping the airlines interested in the program, especially when times are good, will require incentives over and above what we have offered in the past.

The Wave of the Future .....

The latest information from headquarters, AMC reveals several serious shortfalls in CRAF airlift capabilities which impact on national security contingency requirements, the most serious

being aeromedical evacuation capability. Figure 2 lists current CRAF requirements versus committed capability.

FIGURE 2

CRAF Requirements vs. Capabilities (Wide Body Aircraft)

Type Aircraft	Stage I	Stage II	Stage III
Passenger	30/30	87/87	136/133
Cargo	30/31	75/75	120/111
Aeromedical	0/0	25/19	44/19

Source: US Air Mobility Command, Civil Reserve Air Fleet (CRAF) Program and Issues (Scott Air Force Base, IL: 12 September 1995)

All indications suggest that in the future, the gap will continue to widen. There are several reasons for this:

First, the experience of the Gulf War made the large carriers aware of the significant business risks associated with being in the CRAF program. Although a majority of the aircraft participating during the peak months from the civil sector came from either the charter carriers or the medium and small cargo carriers, a Stage III activation would have drawn the overwhelming majority of the aircraft from the large carriers. The economic consequences to the US air carriers of a Stage III activation, therefore, are potentially profound.[50] In the case of United and Northwest Airlines, a Stage III activation would mean 55 of their 123 and 54 of their 80 long range aircraft respectively. For the two main cargo carriers--Federal Express and United Parcel Service, a Stage III activation would cut their fleet in half.

A second reason airlines are reluctant to sign-up for the CRAF program centers around the carriers' concern with DoD's Indemnification program. DoD's Indemnification program, authorized under Public Law 85-804, as amended, covers war risks during a CRAF activation

that are not covered by title XIII insurance. However, there is no separate insurance fund available for claims resolution as there is under the title XIII program. Therefore, if a carrier files a claim for indemnification, and insufficient funds are available for settling the claim, DoD would need to request additional funds from the Congress to reimburse the carrier.[51] The program is currently underfunded by approximately $ 57 million dollars or one-third the cost of a widebody aircraft. Even though the government underwrites CRAF mission, potential delays in trying to collect payments concern more than one airline. According to AMC, commercial insurers typically settle claims with the airlines within 48 hours. Because carrier operating expenses are quite high, cash flow is an important consideration.[52]

The Air Mobility command is fully aware of the airline concerns and has taken aggressive action in trying to resolve them. AMC's White Paper on Incentives for Civil Reserve Air Fleet (CRAF) dated 25 August 1992 is the "official" road map to ensure the viability of CRAF by revising the working business relationship with air carriers, proposing incentives that will increase CRAF participation, and removing those disincentives that impact carrier participation.[53] Key features of the White Paper include:

a. Greater linkage of DoD domestic and international transportation business to CRAF members with the intent to expand business to include all government employees. This incentive is valued at over $ 900 million for DoD participation only.

b. Award $ 161 million in contracts to CRAF cargo and freight transporters.

c. Permit CRAF carriers commercial access to military installations and also authorize them the use of military installations for technical stops and for weather alternates. Under this incentive, the carriers would see considerable fuel savings derived by carrying smaller fuel

reserves. For cargo carriers, it would mean a shorter turnaround time by avoiding busy airports in major cities in favor of military airfields usually located near large cities.

d. Most major issues centering around Title XIII insurance have been corrected. The only major area of concern is the small amount of funds available through FAA funds ($ 56 million) and the long amount of time required to settle claims. The Pentagon has instituted a quick fix by using defense business operations funds (DBOF) to pay for large CRAF claims. DBOF is an expansion to the current revolving fund concept to finance the business operations of defense industrial, commercial, and support activities.[54] It allows the service secretary to transfer funds from other accounts to reimburse the Title XIII insurance account.

e. Provide tax incentives to CRAF members to stimulate capital investments in aircraft which have national defense features and capabilities.

f. Request continued funding for the CRAF Enhancement program directed towards incorporating national defense features in CRAF long-range aircraft.

g. Simplify, as much as possible, contractual agreements between the air carriers and the federal government.

Conclusion .....

It is clear that America's strategic airlift capability relies heavily on the civilian reserve air fleet. Also clear is the fact that CRAF activation, while highly successful during Operation Desert Shield/Storm, is not without risk. The motivating factor behind CRAF participation continues to be access to peacetime airlift business.

The current incentives mentioned in the previous section, when adopted, will do much to enhance the viability of the CRAF program. However, given the realization that the level of peacetime business, as we know it today, will continue to decline, we must continually look for creative ways to compensate for this. Some suggestions by Ronald A. Lane, Chairman, Evergreen International Airlines include:[55]

a. Consider expanded use of CRAF carriers for all airlift requirements including industrial relief activity and emergency requirements such as FEMA, however, only after military training needs for these missions have been met. It makes no sense to degrade our military requirements for the sake of the civilian sector.

b. Utilize US Air Force assets to fly domestic cargo missions for the CRAF members during their "peak" months. This would free their aircraft for the more lucrative international routes. It would also eliminate the need for CRAF members to lease very expensive cargo space from other airline companies and leasers for this limited time period.

c. Provide low cost government sponsored loans to CRAF members. Such loans could be made available for financing aircraft suitable to the CRAF program.

d. Have the US government conduct bilateral negotiations with foreign countries to lower their trade barriers. The government could then have access to those new markets available to CRAF participants. One example would be when a foreign government permits an airline to fly goods into and out of the country and conduct limited commerce on the ground. An airline in the cargo business could develop a ground distribution network in a foreign country that would collect goods at, or distribute them, from the air terminal, thus potentially increasing commercial business in today's most profitable markets.[56]

e. Once activation occurs, allow airlines to use their own airports or hubs to pick up passengers and cargo. This allows greater efficiency (and efficiency means money to the airline) in carrying out their mission.

Some of these ideas could be easily implemented while others are likely to prove difficult. But, if we are to protect the CRAF program, the government must do whatever is necessary to ensure its national security strategy can be carried out.

A healthy CRAF program that serves the needs of both the United States and the airline industry is in everyone's best interest and should be a national priority.

END NOTES

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